

AMENDMENTS TO THE CLAIMS

Listing of claims:

1. (canceled)
2. (currently amended): The improved applanation lens of claim [1] 19, wherein said applanation lens has a transmittance of greater than 90% for wavelengths of light from 275nm - 2500nm.
3. (original): The improved applanation lens of claim 2, wherein said applanation lens has a transmittance of greater than 90% for a wavelength of about 1053nm.
4. (currently amended): The improved applanation lens of claim [1] 19, wherein said applanation lens has an index of refraction of approximately 1.46.
5. (currently amended): The improved applanation lens of claim [1] 19, wherein said applanation lens is formed of an SiO₂ with a purity great enough to resist discoloration upon prolonged irradiation by high energy radiation such as gamma rays or neutrons.
6. (previously presented): The improved applanation lens of claim 5, wherein said high purity SiO₂ is noncrystalline.
7. (canceled)
8. (canceled)
9. (canceled)
10. (canceled)
11. (canceled)
12. (canceled)

13. (previously presented): A method for applanating an anterior surface of a patient's eye and coupling the eye to a surgical laser, the method comprising the steps of:

a. providing an interface that has been sterilized with gamma radiation, the interface including a central orifice, and an applanation lens having top and bottom surfaces;

b. removably coupling a suction ring to the bottom surface of the interface; positioning the interface over an operative area of an eye, such that the suction ring comes into proximate contact with the surface of the eye;

c. applying a suction to the suction ring to thereby stabilize the position of the interface relative to the operative area of the eye;

d. positioning the applanation lens in proximate contact with the operative area of the eye, said applanation lens having an applanation surface configured to contact the eye said applanation lens being formed of high purity synthetic fused SiO_2 , such that said applanation lens does not discolor or lose light transmittance when subjected to gamma radiation; and

e. coupling the applanation lens to the interface to thereby stabilize the position of the lens relative to the operative area of the eye.

14. (original): The method of claim 13, wherein said applanation lens has a transmittance of greater than 90% for wavelengths of light from 275nm - 2500nm.

15. (original): The method of claim 14, wherein said applanation lens has a transmittance of greater than 90% for a wavelength of about 1053nm.

16. (original): The method of claim 13, wherein said applanation lens has an index of refraction of approximately 1.46.

17. (previously presented): The method of claim 13, wherein said applanation lens is formed of an SiO_2 with a purity great enough to resist discoloration upon prolonged irradiation by high energy radiation such as gamma rays or neutrons.

18. (previously presented): The method of claim 13, wherein said high purity SiO_2 is noncrystalline.

19. (new): An improved applanation device specifically adapted for forming a mechanical interface structure between the anterior surface of a patient's cornea and a surgical laser, the improved device comprising:

(a) a frame for holding an applanation lens onto the outer surface of the patient's cornea;

(b) the lens being sized and shaped to be held in the frame and having an applanation surface configured to contact the outer surface of the patient's cornea and provide a reference surface from which the laser is able to compute a depth of focus characteristic, said lens being formed of high purity synthetic fused silicon dioxide (SiO_2) such that said lens does not discolor or lose light transmittance when subjected to gamma radiation.